

REMARKS

Claims 1-16 are pending. Claim 1 is amended herein. New claims 15 and 16 have been added herein. Support for the amendments is detailed below. Support for the new claims are found at page 5, lines 7-9 and 23-25 of the specification.

Applicants' Response to the Claim Rejections under Double Patenting and 35 U.S.C. §103(a) Rejections over Akada in view of Nagai

Claims 1-14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of Akada (U.S. 7,259,803) in view of Nagai (US 5,677,045). Further, claims 1-14 are also rejected under 35 U.S.C. § 103(a) as being obvious over Akada (US 7,259,803) in view of Nagai (US 5,677,045). In response thereto applicants have amended claim 1 to more distinctly claim the subject matter regarded as the invention. Specifically, applicants have included the feature of the present invention that the inorganic particles have a mean particle diameter of 100 nm or smaller.

As set forth in the present specification at page 5, lines 7-9, the inorganic particles of the present invention preferably have a mean particle diameter of 100nm or smaller. As detailed in applicants specification, by using the inorganic particles having a mean diameter of 100 nm or smaller, the resin sheet of the present invention can produce an excellent effect of making it possible to not only lower the coefficient of linear expansion, but also maintain an excellent transparency.

Neither Akada nor Nagai disclose this feature of amended claim 1. Further, neither reference teaches inorganic particles having a mean particle diameter of 100 nm or smaller or their

affect for maintaining an excellent transparency within a resin sheet. Amended claim 1 limits the inorganic particles to those having a mean particle diameter of 100 nm or smaller. The resin sheet of claim 1 having this feature can produce an excellent effect of making it possible to not only suppress thermal shrinkage and expansion by lowering the coefficient of linear expansion, but also maintain an excellent light transparency for substrates of image display devices, solar cells and the like.

In the above respect, Akada, cited by the Office, does not disclose nor provide a reason for the simultaneous use of a glass fiber cloth-like material and inorganic particles. Also, Akada does not disclose nor provide a reason for one of skill in the art to ascertain an effect of maintaining an excellent light transparency by limiting the particle diameter of the inorganic particles to 100 nm or smaller.

In regard to Nagai, cited by the Office, the reference does not disclose nor provide a reason for one of skill in the art to ascertain any idea as to how small or how large the inorganic particles are to be sized when a resin sheet is formed by the simultaneous use of a glass fiber cloth-like material and the inorganic particles. Furthermore, Nagai neither discloses nor provides a reason for one of skill in the art to ascertain an effect of maintaining the aforesaid excellent light transparency by limiting the particle diameter of the inorganic particles to 100 nm or smaller. Specifically, Nagai discloses only a device relating to a laminate body for use in a field, such as a circuit substrate, which has no relation with “transparency,” and therefore is completely different in technical field from the field of the present invention that is mainly applied to a substrate of a display device or the like.

Wherefore, in light of the amendment to claim 1, applicants respectfully submit that the presently claimed invention is not obvious under either nonstatutory obviousness-type double patenting or 35 U.S.C. §103(a).

Applicants' Response to the Claim Rejections under 35 U.S.C. § 102

Claims 1, 2, 5-8 and 10-14 are rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Shibahara (US 7,132,154). As noted above, applicants have amended claim 1 to more distinctly claim the subject matter regarded as the invention by including the range of the particle diameter of the inorganic particles as 100 nm or smaller. Shibahara does not teach this feature, nor is there any reason provided by the reference whereby one of skill in the art would discern the use of inorganic particles of this diameter.

Shibahara teaches a transparent composite composition which is comprised of two epoxy resins and a glass filler. Shibahara stresses that one of the epoxy resins must have a higher refractive index than the glass filler, and the other epoxy resin must have a lower refractive index than the glass filler. See Abstract. In regard to the glass filler the Office Action points to the disclosure at col. 9, lines 1-8 which lists glass fillers, and asserts that both glass cloth and glass beads are listed with glass cloth being preferred. However, there is no disclosure which addresses particle diameter of any glass beads as it is merely one of an extended list of possible fillers.

Contrary, the current specification teaches that the inorganic particles should have a mean particle diameter of 100nm or smaller. See page 5, lines 7-19 and *supra*. Wherefore, by adding

this feature to parent claim 1, applicants respectfully submit that Shibahara does not teach all the features of the presently claimed invention, and therefore does not anticipate the present invention under 35 U.S.C. §102. Further, Shibara does not provide a reason for adopting inorganic filler glass beads within the claimed particle diameter, as the glass beads are merely one alternative listed for glass filler. As such, there is no reason for one of skill in the art to discern this claimed feature; and therefore, parent claim 1 is not obvious in light of Shibahara under 35 U.S.C. §103(a).

Applicants' Response to the Claim Rejections under 35 U.S.C. § 103 under Shibahara and Babb

Claims 3 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shibahara as applied to claims 1, 2, 5-8 and 10-14 above. Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shibahara as applied to claims 1, 2, 5-8 and 10-14 above, and further in view of Babb (US 5,730,922). Applicants respectfully submit that by addressing the rejection to parent claim 1 as detailed above, the rejection of these claims are likewise addressed based on their dependency.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.


If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

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Amendment
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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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